

## Figure 1:

Left & Center: REELS spectra from Ag and STO (not reconstructed) plotted on a logarithmic scale to show the high dynamic range of the signal and wide range fitting to a Gauss distribution. Right: Elastic peak shows the recoil loss shift between Ag and Chitin (mostly H,C and O).

Figure 2: Left:Elastic peak imaging of a STO surface after etching, Right: Cathodoluminescence image of the same region. Figure 3: Left: SE image of a chitin exoskeleton plagued by charging effects. Center: Imaging of the elastic peak not sensitive to charging. Right: Cathodoluminescence image. Figure 4:

Figure 4: Left: Elastic Peak image of a Ag surface before cleaning. Right: image of the C plasmon signal.



P. Staib, REELS and Elastic Peak Spectroscopy using a new multi- technique compact SEM detector